

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

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| In the Matter of |) | |
| |) | |
| Amendment of Part 15 of the Commission's Rules |) | RM-11812 |
| To allow higher power operations of P2MP |) | |
| Consistent with the P2P System power limits |) | |
| |) | |

COMMENTS OF WI-FI ALLIANCE

Wi-Fi Alliance®^{1/} submits these comments in response to the above-referenced Petition for Rulemaking (“Petition”) submitted by Radwin, LTD (“Radwin”).^{2/} In principle, Wi-Fi Alliance believes that rule changes designed to encourage the expanded use of electronically steered and phased antenna arrays will lead to more efficient use of the U-NII-1 (5.15-5.25 GHz) and U-NII-3 (5.725-5.85 GHz) bands, and may be instrumental in fostering an expansion of wireless Internet access. Nevertheless, Wi-Fi Alliance encourages the Commission to assess the impact of the deployment of high-power, non-line-of-sight, point-to-multipoint systems in urban and suburban settings, or more generally in locations with a high density of Wi-Fi users, on the performance of low-power systems. Wi-Fi Alliance therefore urges the Commission to adopt a

^{1/} Wi-Fi®, the Wi-Fi logo, the Wi-Fi CERTIFIED logo, Wi-Fi Protected Access® (WPA), WiGig®, the Wi-Fi Protected Setup logo, Wi-Fi Direct®, Wi-Fi Alliance®, WMM®, Miracast®, Wi-Fi CERTIFIED Passpoint®, and Passpoint® are registered trademarks of Wi-Fi Alliance. Wi-Fi CERTIFIED™, Wi-Fi Protected Setup™, Wi-Fi Multimedia™, WPA2™, WPA3™, Wi-Fi CERTIFIED Miracast™, Wi-Fi ZONE™, the Wi-Fi ZONE logo, Wi-Fi Aware™, Wi-Fi CERTIFIED HaLow™, Wi-Fi HaLow™, Wi-Fi CERTIFIED WiGig™, Wi-Fi CERTIFIED Vantage™, Wi-Fi Vantage™, Wi-Fi CERTIFIED TimeSync™, Wi-Fi TimeSync™, Wi-Fi CERTIFIED Location™, Wi-Fi Location™, Wi-Fi CERTIFIED Home Design™, Wi-Fi Home Design™, Wi-Fi CERTIFIED Agile Multiband™, Wi-Fi Agile Multiband™, Wi-Fi CERTIFIED Optimized Connectivity™, Wi-Fi Optimized Connectivity™, and the Wi-Fi Alliance logo are trademarks of Wi-Fi Alliance.

^{2/} See, *Consumer & Governmental Affairs Bureau Reference Information Center Petition for Rulemakings Filed*, Public Notice, Report no. 3097, (rel. June 29, 2018); *In the Matter of RADWIN LTD, Amendment of Part 15 of the Commission's Rules to allow higher power operation for P2MP, consistent with the P2P System power limits*, RM-11812 (filed June 18, 2018).

Notice of Proposed Rulemaking (“NPRM”) seeking comment on and further exposition of the proposed amendments.

Wi-Fi Alliance is a global, non-profit industry association of over 800 leading companies from dozens of countries devoted to connecting everyone and everything everywhere. With technology development, market building, and regulatory programs, Wi-Fi Alliance has enabled widespread adoption of Wi-Fi® worldwide, certifying thousands of Wi-Fi products each year. Certified, interoperable Wi-Fi systems are critical to the nation’s wireless ecosystem, and are key components of the country’s economic growth and catalysts for technological innovation. The mission of Wi-Fi Alliance is to provide a highly effective collaboration forum for Wi-Fi matters, grow the Wi-Fi industry, lead industry growth with new technology specifications and programs, support industry-agreed standards, and deliver greater product connectivity through interoperability, testing, and certification.

The Petition proposes amendments to the rules that would allow certain point-to-multipoint devices to operate at the effective isotropic radiated power (“EIRP”) levels currently permitted for point-to-point devices in the U-NII-1 and U-NII-3 bands.^{3/} In particular, Radwin notes that its sequential “multiple directional beam” technology will allow these devices to provide the functionality of point-to-multipoint, but cause no more interference than currently permitted point-to-point devices.^{4/} This implementation of sequential multi-beam antenna technology will allow improved performance in gain, capacity, range, and robustness at no

^{3/} *Petition* at Appx. A.

^{4/} *Id.* at 3.

additional cost or interference.^{5/} Radwin notes that its proposed regulatory structure is already in place with respect to the 2.4 GHz band.

Wi-Fi Alliance recognizes the potential benefit of encouraging point-to-multipoint deployment in U-NII bands. State-of-the-art devices designed for point-to-point and point-to-multipoint operation in U-NII bands are able to deliver last-mile traffic that can be further distributed in and around homes, offices, campus and other settings using Wi-Fi, thereby providing Americans with enhanced wireless Internet access. The ability to use technology that uses sequential directional beams with higher EIRP in the U-NII-1 and U-NII-3 bands has the potential to increase the range and utility of those devices, lowering the cost of deploying wireless Internet services in rural areas and increasing spectrum efficiency.^{6/} Rural Wireless Internet Service Providers (“WISPs”), in particular, will benefit, because they will be able to connect to more customers, with better service, than with point-to-point or legacy point-to-multipoint systems. More customers will be able to receive service from existing installations, and more locations will be economically sensible for providers to serve. This will improve WISPs’ ability to close the digital divide, a primary goal of the Commission.^{7/}

Wi-Fi Alliance recommends that the Commission seek comment on the technical claims made by Radwin in its petition, specifically examining the relative effects in rural versus non-

^{5/} *Id.*

^{6/} Consistent with the rules governing the 2.4 GHz band, Radwin proposes that the Commission permit increased EIRP for point-to-multipoint systems that operate multiple beams “simultaneously or sequentially.” *See*, 47 C.F.R. 15.247 (c)(2). Wi-Fi Alliance supports modification of the rules for the U-NII-1 and U-NII-3 bands to allow sequential transmissions for the reasons Radwin states. While Wi-Fi Alliance recognizes that Section 15.247(c)(2) of the rules permits both sequential and simultaneous transmissions, the rationale that Radwin presents appears most applicable to sequential transmissions.

^{7/} *See, e.g., Remarks of FCC Chairman Ajit Pai at the Farm Foundation/U.S. Department of Agriculture Summit*, Apr. 18, 2018 (“On my first day as FCC Chairman in January 2017, I said that my number one priority was closing the digital divide and bringing the benefits of the Internet age to all Americans”).

rural deployments and the potential risk to low-power Wi-Fi devices operating in the vicinity of point-to-multipoint systems servicing residences and businesses where Wi-Fi is widely used.

Also, noting that the maximum EIRP allowed for fixed point-to-point systems is different in 47 CFR Sections 15.247(c)(1)(i), 15.407(a)(1)(iii), and 15.407(a)(3), Wi-Fi Alliance recommends that the Commission seek clarification on what limitations would be most suitable for point-to-multipoint systems in U-NII-1 and U-NII-3 bands.

Wi-Fi Alliance therefore urges the Commission to issue a notice of proposed rulemaking to explore further the changes that Radwin recommends.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I, Jonathan Markman, hereby certify that on July 30, 2018, copies of the foregoing

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